

REMARKS

Claims 1-3, 5, 6, 8-20, 22, 23, 25 and 35-47 are now pending in the application. Claims 1, 11, 17, 18, 22, 38, 40, 43, and 47 are amended by this amendment. Specifically, Claim 18 has been amended into independent format including the subject matter of Claim 17. Claims 48-53 are added by this amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

APPLICANT INITIATED INTERVIEW SUMMARY

Applicants thank the Examiner for the interview granted with Applicants' representative on February 25, 2008. During the interview, the art cited in the rejections was discussed in light of the pending claims. Although no agreement as to the allowability of all of the pending claims was reached, Applicants' representative believes that an agreement was reached regarding various claims. For example, Applicants respectfully submit that an agreement was reached that a shelf within a standoff feature was allowable in light of the art cited in the rejections. Further, Applicants believe that an agreement was reached that the application as filed described a retention force providing member that includes an elastomer band at least at page 12, and therefore, claims regarding elastomer bands were in condition for allowance in light of the art cited. Finally, Applicants believe that an agreement was reached that a standoff feature that positions a portion of the device above a surface was also in condition for allowance in light of the cited art.

Applicants request that the Examiner consider the following arguments and

amendments included in this amendment and contact Applicants' representative if each of the presently pending claims is not found to be in condition for allowance.

REJECTION UNDER 35 U.S.C. § 112

Claims 11, 12, 14-16, 38-40 and 43-47 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

Independent Claim 11 recites "at least one relief opening in **a portion** of the spherical socket defined by a complete disassociation of at least **two portions** of the spherical socket" and Claim 38 has been amended to recite "the relief openings are defined as a complete passage between at least two members defining at least a portion of the spherical socket." As exemplary shown in Fig. 1C, a spherical socket 132 is defined at least in part by portions or members extending from a portion of the base unit and including a relief opening 134 through the extension portions. Therefore, Applicants respectfully submit that a relief opening does extend completely through a portion of the socket. Therefore, Applicants respectfully request that the Examiner withdraw the rejection to Claims 11 and 38.

Claim 40 has been amended to recite "at least two members deformably connected" and independent Claim 43 has been amended to recite "at least two fingers are operable to deform." Applicants respectfully submit that the application as filed, such as page 9, lines 12-25, clearly support deformation of a portion of the spherical socket. Therefore, Applicants respectfully request that the rejections of Claims 40 and 43 be withdrawn.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3, 5, 9 and 35-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson et al. (U.S. Pat. Pub. No. 2003/0114752A1) in view of D'Urso (U.S. Pat. No. 5,752,962). Claims 2, 6 and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson et al. in view of D'Urso as applied to the claim 1 above, and further in view of Mowlai-Ashtiani (U.S. Pat. No. 6,110,182). Claims 11, 12, 15, 16, 39 and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson et al. in view of Mowlai-Ashtiani and D'Urso. Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson in view of Mowlai-Ashtiani and D'Urso as applied to claim 11 above, and further in view of Ghajar et al. (U.S. Pat. No. 4,998,938). Claims 17-20 and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson et al. and Magee et al. (U.S. Pat. No. 5,957,927). Claims 22, 23 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over D'Urso in view of Mowlai-Ashtiani and Hennig (U.S. Pat. No. 6,328,748). Claims 22 and 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson et al. in view of Mowlai-Ashtiani, D'Urso and Hennig. Claims 43-47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henderson et al. in view of Mowlai-Ashtiani and Magee. These rejections are respectfully traversed.

CLAIM 1

Independent Claim 1 has been amended to recite “a substantially planar portion . . . wherein the number of standoff features attached to the base unit extends from a second side of the substantially planar portion to position the substantially planar portion a distance away from the skull.” Contrary to this, Henderson et al. is directed to an instrument guidance system that can be attached to a skull. In Henderson et al., a base plate 140 includes mounting tabs 142 that extend radially. There are no standoff features to position a substantially planar portion a distance away from a skull. As argued in Applicants previous amendment, D’Urso also does not include a standoff feature, as recited in independent Claim 1. Applicants respectfully submit that D’Urso does not disclose a substantially planar portion or a deformable spherical socket. Moreover, D’Urso does not include standoff features as recited in independent Claim 1. Therefore, Applicants respectfully request that the rejections to independent Claim 1, and the claims that depend therefrom, be withdrawn, as discussed with the Examiner.

Also, Applicants note that D’Urso discloses a locking screw 30 that extends through a socket 25. This is contrary to the deformable spherical socket recited in independent Claim 1. Furthermore, Claim 3 recites, “wherein the actuating device is adapted to cause substantially symmetric tightening of the spherical socket around at least a part of the spherical portion.” The subject application, as filed, discloses that symmetrical deformation is appropriate in contrast to other actuation devices that do not clamp symmetrically, such as a set screw extending from one side of a socket joint. See, the subject application, page 9, lines 22-25.

CLAIM 11

Independent Claim 11 has been amended to recite “wherein the standoff features attached to the base unit extend from a second side of the substantially planar portion . . . wherein the substantially planar portion of the base unit and the spherical socket is adapted to mount above the skull.” Applicants respectfully submit that neither Henderson et al., nor D’Urso anticipate or fairly render obvious independent Claim 11 for reasons similar to Claim 1. In addition, Mowlai-Ashtiani also fails to disclose a substantially planar portion or standoff feature as recited in independent Claim 11. Mowlai-Ashtiani discloses a socket that is affixed to a link 82 that extends from a target halo 80 above a patient. Therefore, Mowlai-Ashtiani does not anticipate or fairly render obvious the standoff features as recited in independent Claim 11, including the standoff features adapted for placement adjacent to an opening in a skull of a subject.

CLAIM 17

Independent Claim 17 has been amended to recite “a shelf that extends into a bore defined by the at least one standoff feature.” As discussed above, Applicants respectfully submit that Henderson et al. does not disclose a standoff feature as recited in independent Claim 17. Similarly, Magee et al. fails to disclose any standoff features as recited in independent Claim 17. Rather Magee et al. discloses a bone fixation introducer system. Although Magee et al. discloses a retaining element 62, Applicants respectfully submit that Magee et al. does not disclose a shelf as recited in independent Claim 17. Therefore, independent Claim 17 is in condition for allowance. Applicants also believe that an agreement was reached with the Examiner, as summarized above, regarding the amendment to independent Claim 17.

CLAIM 18

Claim 18 has been amended in a non-narrowing manner into independent format including the subject matter of independent Claim 17. Independent Claim 18 recites "wherein the retention force providing member includes an elastomer band." As discussed with the Examiner during the interview, Applicants respectfully submit that Magee et al. does not anticipate or fairly render obvious an elastomer band. Applicants also respectfully submit that the application as filed does specifically disclose an elastomer portion 333, such as an elastomer band. See the subject application, pg. 12, ln. 21. Therefore, Applicants respectfully request that the Examiner withdraw the rejection to newly amended independent Claim 18, as the Examiner agreed to do during the interview.

CLAIM 22

Applicants respectfully submit that a combination of Hennig with either of D'Urso or Mowlai-Ashtiani is actually contrary to the teachings of the combination. Both Mowlai-Ashtiani and D'Urso are directed to sockets that are positioned relative to a skull, but not driven into the skull. Contrary to this, Hennig discloses that the external threads 8 are driven into a burr hole formed in the skull. See Hennig, col. 5, lns 62-66. Therefore, the combination of Hennig with D'Urso and Mowlai-Ashtiani appears to be improper.

Independent Claim 22 has been amended to recite "a shelf defined within a perimeter of the standoff features." Applicants respectfully submit that an agreement

was reached with the Examiner regarding a shelf defined within the perimeter of a standoff feature as recited in independent Claim 22 at least in that it is not anticipated or fairly rendered obvious by the art cited in the rejections. In this regard, Applicants respectfully submit that neither D'Urso, nor Mowlai-Ashtiani anticipate or fairly render obvious a shelf as recited in independent Claim 22. Moreover, Applicants respectfully submit that Hennig does not overcome any of the failings of D'Urso or Mowlai-Ashtiani. In fact, contrary to a standoff feature, Applicants respectfully submit that Hennig discloses a base 1 that screws directly into a skull via an external threaded section 8. See Hennig, col. 5, Ins. 62-66. Therefore, Hennig actually teaches away from standoff features as recited in independent Claim 22.

Applicants also submit that the combination of Henderson et al. with any or all of Mowlai-Ashtiani, D'Urso and Hennig do not overcome the failings of Mowlai-Ashtiani, D'Urso and Hennig. As discussed above, Henderson et al. does not disclose a standoff feature or a shelf, as recited in independent Claim 22. Therefore, independent Claim 22 is in condition for allowance.

CLAIM 43

Finally, independent Claim 43 recites "a deformable spherical socket including at least two fingers extending from the first portion . . . the at least two fingers are operable to deform relative to the first portion; an actuating device that surrounds and engages the entire outer perimeter of the spherical socket and operable to substantially symmetrically compress the at least two fingers." As discussed above, the subject application, as filed, discloses that such a spherical socket including symmetrical

clamping reduces or eliminates a lateral motion of the spherical portion and can be provided for various reasons. See the subject application, pg. 9, Ins. 20-25.

Initially, the asserted combination of Henderson et al. and Mowlai-Ashtiani to render obvious each of the elements of independent Claim 43 appears to be improper. Mowlai-Ashtiani discloses a band that includes channels and a throughbore with a tightening member 52 having a knob 54. See Mowlai-Ashtiani, col. 3, Ins. 58-67 and Fig. 2. Henderson et al. is directed to a locking plate 432 and a locking plate screw portion 1040. A locking plate is inoperable to screw down onto external threads 1040 when a screw, such as the screw 50, is in the way. Therefore, the combination of Mowlai-Ashtiani and Henderson et al. appears to be inoperable. Accordingly, Applicants respectfully submit that such a combination is improper to reject independent Claim 43.

Moreover, even if a combination of Mowlai-Ashtiani and Henderson et al. were proper, it would still not anticipate or fairly render obvious each of the elements of independent Claim 43. For example, independent Claim 43 recites "a relief opening is defined as a complete separation between the at least two fingers." Applicants respectfully submit that the channels 23 and 24 of Mowlai-Ashtiani are clearly not complete separations at least because they include wall portions or end portions 26, 28. See Mowlai-Ashtiani Fig. 3. Moreover, if the complete separations were present there would be no portion to hold the various ring elements together when the screw 52 is applied. The member portions 12, 14 would simply fall away from the link 82 as there would be nothing to hold it in place if the channels 22, 24 were complete separations. Therefore, independent Claim 43 is not anticipated or fairly rendered obvious by

Mowlai-Ashtiani and the combination only appears to have been possible using impermissible hindsight reasoning where Claim 43 was used as a template.

Moreover, independent Claim 43 recites "an actuating device that surrounds and engages the entire outer perimeter of the spherical socket and operable to substantially symmetrically compress the at least two fingers of the spherical socket." Such an actuation device, as claimed, provides symmetrical compression as opposed to a single set screw or the like. Therefore, Applicants respectfully submit that Mowlai-Ashtiani is contrary to independent Claim 43 at least because Mowlai-Ashtiani only includes a single screw 52.

As discussed above, Magee et al. is directed to a bone fixation introducer and does not overcome the failings of Mowlai-Ashtiani or Henderson et al.

Therefore, independent Claim 43 is in condition for allowance.

Further, claims that depend from independent Claim 43 also include patentable subject matter. For example, dependent Claim 46 recites "an elastomer band" which, as discussed above, is disclosed in the application as filed and not fairly rendered obvious or anticipated by the cited references.

Further, dependent Claim 47 recites "a shelf extending into the at least one standoff feature." As discussed with the Examiner, Applicants respectfully submit that the shelf extending into the standoff feature is not anticipated or fairly rendered obvious by the art cited in the rejections.

Therefore, Applicants respectfully submit that each of the presently pending claims is in condition for allowance. Applicants respectfully submit that the present amendment places each of the presently pending claims in condition for allowance and

request that the present amendment be entered at least because previously pending Claims 18 and 41, both reciting an "elastomer band" were improperly rejected based upon the disclosure in the subject application and the cited art. Such improper rejections were discussed with the Examiner and the Examiner agreed to withdraw the rejections based upon the disclosure in the subject application.

NEW CLAIMS

New Claims 48-53 are added by this amendment.

Claims 48-52 are directed to the position of a shelf, as discussed with the Examiner. The position of the shelf is disclosed in the application as filed, and does not add any new subject matter.

Claim 53 is directed to a standoff feature to position a base unit.

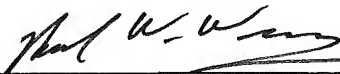
Applicants submit that an agreement was reached with the Examiner that these features were not anticipated or fairly rendered obvious by the art cited in the rejections.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: March 25, 2008

By: 
Richard W. Warner, Reg. No. 38,043
Michael L. Taylor, Reg. No. 50,521

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

RWW/MLT/srh